GVD
NEC SFA-ready
AI NVR M3A04

Standalone & turnkey NVR powered by preinstalled HD NVR software suite to deliver essential and high-end IP video surveillance

To run a building complex, retail chain, city, or nation, it needs various systems that are usually so different, with different data structures and different software applications. In the past, it meant troubles and chaos when it came to system integration. Data acquisition alone poses many challenges. System integrators have to decide a communication protocol for different systems to work together and exchange system data over the network.

To fix the problem of data exchange, except for Modbus support in NVR and modular design in VMS, GVD additionally features this high-performance NVR M3A04 to feature Deep-Learning AI, sophisticated VCA, and Facial Recognition.

GVD's Central Management Platform is managed by VMS Manager to promptly and remotely control and configure the whole video system.
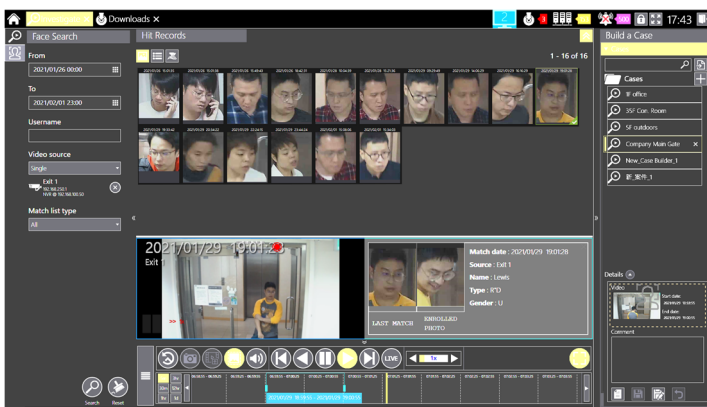
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Facial Recognition

As retail heads to an unmanned world, the technologies allowing customer's self-service become crucial, such as an access control without check-in and an automatic charge without checkout.

And, as enterprise heads to automation, the technologies saving staff cost become popular. For example, a sensor that auto sets room temperature, or a gate that identifies a visitor by his moving face in real-time as he walks in naturally without stopping in front of the camera.

NEC, the currently most precise face-recognition engine in the world, comes to the helps of the retailers and enterprise leaders, not only for access control but also to deter shoplifting.

Now GVD M3A04 can receive NEC data and exchange data with GVD VMS.

GVD features

- Retrieves a face alarm on-map
- Retrieves a face alarm with relevant video
- Supports watch lists of faces
- Supports the setup of face alarms (with GVD Rule Wizard)
- Pushes face alarm notices onto mobile phones/tablets
- Documents your investigation of faces (with GVD Case Builder)

1 Run a face search and document your facial investigation on GVD VMS.

2 Export your face investigation to a systematic PDF report.

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GVD HVR Highlights

■ **Virtual Hard Disk (VHD) - Painless system recovery**

GVD loads the NVR with a "virtual hard disk" (VHD), which is a Windows-based system image tool to take a snapshot of system status and NVR software settings to recover your system within 5 minutes once a severe system failure or OS/software corruption occurs in the future. This tool can reduce not only RMA but also the need for on-site support. For users, everything just falls back into place so soon.

■ **Bandwidth economy - Less demand on network bandwidth**

Network bandwidth is the critical consideration when it comes to IP video surveillance system, especially when a large group of cameras is in there. To diminish the impact of limited bandwidth, the NVR adopts a variety of techniques such as TSE (Time Sector Engine), ROI, Turbo Mode, Adaptive Video Streams, Playout Control, Live Multicast, sub channels and so on to maintain video quality and fluent streams.

■ **Dual-monitor display - Broad viewing horizons**

The NVR extends the video view onto a secondary display. Max. 80 live video can be seen on two screens simultaneously on your workstation. To handle HD video and large video data, the NVR takes advantage of the technique such as TSE (Time Sector Engine), ROI, Turbo Mode, Adaptive Video Streams, Playout Control, Live Multicast, sub-channels and so on to boost the display performance, even with limited bandwidth.

■ **Region of Interest - Gets the most out of a megapixal cam**

The HD NVR Manager features ROI (Region of Interest), which takes advantage of ePTZ for non-mechanic cameras to perform digital PTZ. Use an ROI to get the extreme close-up of a small zone from a high-resolution video without losing high sharpness. Besides, ROIs can be saved with video patterns to facilitate video viewing.

■ **Dual codec & sub channels - Optimal video live-view**

For a camera capable of substreams, GVD HD NVR Manager allows multiple video profiles to send a lowerprofile substream instead of the higher-profile mainstream over a congested network. The software can also record and store these substreams in reduced size of storage, and the NVR supports dual codec of cameras to allow different compressions for live video view, playback and recording.

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GVD VMS Features

Case Builder

GVD's VMS Manager features a Case Bilder that systematically documents your investigation on a suspicious case on your business floors. Record each your investigation act with a "note", supported by a text description, video clip, or screenshot. Then, further store these "notes" in a "list", which then forms an organized documentation of your investigation on an a case. In some worst conditions, the document provides you with the evidence required for criminal investigation.
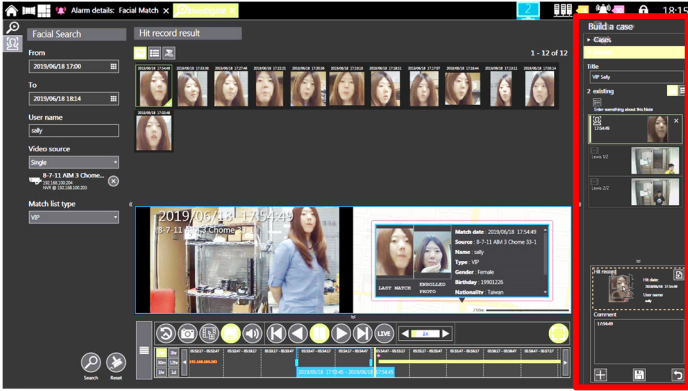

GIS maps integration

The VMS Manager integrates "Facility Maps" and "GIS maps" to truly mitigate the complexity of large-scale IP video surveillance city-wide or nation-wide. You can search for a face and view where a face hit took places on-map.
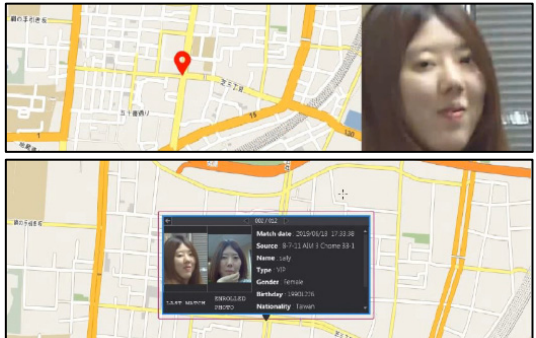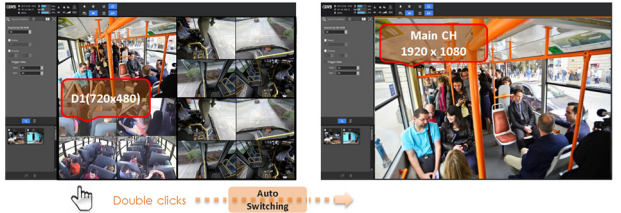

SW-E2200-CW03 bundled & powerful data retrieval

A software program SW-E2200-CW03, i.e. "CMS Manager", is pre-installed with the VMS Manager to bring a full remote configuration tool of NVRs and cameras. This "CMS Manager" features powerful data retrieval for POS, ATM, LPR, including search by time, by a number, by interest lists, and also "fuzzy search" for license plate numbers.
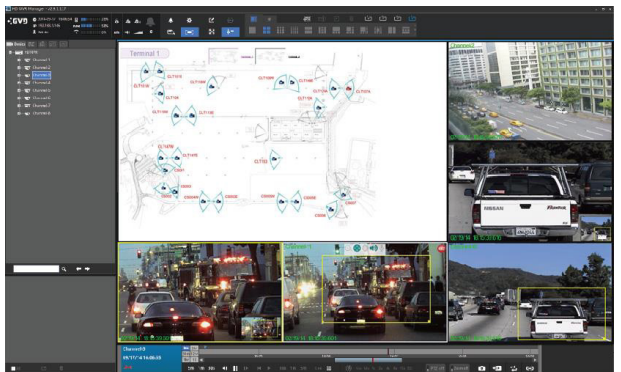
Adaptive Video Streams

Adaptive Video Streams is a technology for a viewer to stream not necessarily the high-profile main stream but possibly the low-profile sub stream as long as the size of the accessing viewer is small enough to compensate for the low video quality, which poses a great help for video display in poor network conditions. The VMS Manager lets you enable/disable this feature for an individual viewer, and there is also a platform-wide limit on the viewer size to give up this feature, which makes the feature more flexible.

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System architecture

E4200 / E2200
VMS Workstation
VMS Conductor

D4200
VMS Videowall

Command Center

LAN

C5104-DBS
VMS Database Server
C5104-IGS
iGlance Server
C6101-VLC
Device Keeper

X8024
Archive
Server

X5016
Failover
Server

A5208 / N1100
AI AppPack Server
AI Edge Node

Microsoft Azure
Google Cloud
AWS
Public / Private Cloud

S6000
Extended
Storage

M6000
NVR

M4000 / M3000 /
M2000 NVR

IP cam

E4200 / E2200
VMS Workstation
VMS Conductor

5G

M1000
Mobile
NVR

iOS /
Android
App

SW-E1100
VMS Conductor Lite

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Specifications

Product		M3A04
Description		NEC SFA-Ready AI NVR
System	CPU	Intel® Core™ i7
	Memory	16GB
	Operating System	Windows® 10 IoT
	Watchdog	Hardware watchdog & software watchdog
Storage	Interface	3.5" SATA III HDD
	Hard disk trays (bays)	4 pcs
	Storage capacity	4 x 10TB
Display	Output	1 x HDMI; 2 x DisplayPort
	Local display resolution	4K
Interface	USB port	Front: 2 x USB3.1; Rear: 6 x USB3.1 + 2 x USB2.0; Onboard: 1 x 2X5 USB 2.0 header; 1 x front USB2.0 header; 1 x front USB3.1 header
	Audio port	Rear: 1 x mic-in, 1 x line-out, 1 x line-in; Onboard: 1 x audio header
	Serial COM port	Onboard: 1 x RS232 header
Network	LAN port	2 x Gigabit Ethernet
Power	Voltage	100~240 Vac, 50-60 Hz
	Power supply	500W
	Avg. consumption (w/o HDD)	110W
Environment	Operating temp.	0°C~40°C (32°F~104°F)
	Storage temp.	-10°C~60°C (14°F~140°F)
	Operating humidity	0%~90%
	Storage humidity	5%~95%
Mechanic	Form factor	Tiny Cube
	Dimensions(W)x(H)x(D)	216 x 198 x 332 mm
	Chassis	Black aluminium chassis; Front panel: brushed aluminium
	Certification	CE, FCC, CE, RoHS, Energy Star 5.0,
	Net weight w/o HDD	3.5 Kg

Software

Video recording	IP camera license	8 or 16 channels; max. 8 x SFA-Ready virtual channels
	Recording rate	Max. 128Mbps
	Recording resolution	D1, 1.3~20 megapixels
	Recording mode	Full-time recording, manual recording, recording by schedule, event, alarm, video motion detection
	Video codec	H.265, H.264, MPEG4, M-JPEG, MxPEG
	Audio codec	G.711, G.726, AAC
	Streaming type	Unicast & multicast
Video display & management	Local display (AVS enabled)	300fps@Full HD
	No. of live video streams	64

Specifications

Product		M3A04
	Display pattern	1, 2, 3, 4, 5, 6, 8, 9, 12, 13, 16, 18, 24, 25, 36, 48, 64
	Live-view operation	ROI, ePTZ, corridor mode, software de-warp, digital zoom in/out, onscreen PTZ
	ONVIF	ONVIF 2.6+, Profile-S
	Synchronous playback	Up to 16ch
	Playback controls	Forward/backward playback, pause, jump to next/previous frame, go to date, speed controls, go to some time later/ago (0.5/1/5 minutes)
	Video export	Via USB (*.MKV, *.AVI & *.AVA supported), digital watermark
	Video search	By time, alarm, event, missing object, foreign object, E-Fence, people counting, transaction data from POS
PTZ	Controlling device	Mouse, K205 Keyboard
	Operation	Direction controls, zoom in/out, preset, patrol
VCA	Features	E-Fence, video motion detection, people counting, missing/foreign object search
	Event search	Search for a missing or foreign object; search for an event of people counting, video motion, or E-Fence
	Trigger source	Video loss, sensor trigger, HDD crash, system crash, abnormal transaction from POS, E-Fence, video motion detection, people counting
	Reaction	User-definable text message, video pattern popup, e-mail, output alarm signal, trigger recording, PTZ preset
	Setup	A Rule Wizard for flexible setup
Alarm	Trigger source	Video loss, sensor trigger, HDD crash, system crash, abnormal transaction from POS, E-Fence, video motion detection, people counting
	Reaction	User-definable text message, video pattern popup, e-mail, output alarm signal, trigger recording, PTZ preset
	Setup	A Rule Wizard for flexible setup
POS	License	4 units
	Integration	Integrable with all brands via POS filters
	Transaction (data) view	Pattern-view with both transaction data and relevant videos
	Data search/retrieval	Search by time, keyword or price to retrieve transaction data with relevant video
	POS alarm	Alarm setup by item or value; supporting popup alarm, email alarm, text message alarm, etc.
Remote access clients	Web client	IE 9.0, 10.0, 11.0
	APP client	iOS 10 and above; Android 5.0 and above
	PC thin client	VMS(E4200), CMS(SW-E2200-CW03), CMS Lite(E90-Window 8 &10)
	Number of clients	5
System	System update	NVR software update
	Backup & recovery	Yes, by VHD (virtual hard disk)
	Event logs	Event logs of system, cameras, users, etc.
	Languages	20+ languages are supported, including English, Spanish, French, Dutch, Italian, Japanese, Chinese, etc.